BEFORE THE

ORIGINAL

Federal Communications Commission

WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	CC Docket No. 92-166
To Establish Rules and Policies	)	
Pertaining to a Mobile-Satellite	)	
Service in the 1610-1626.5/	)	
2483.5-2500 MHz Frequency Bands	)	

To: The Commission

CONSOLIDATED REPLY OF TRW INC.

TRW Inc. ("TRW"), by its attorneys, hereby replies to oppositions and comments filed by AMSC Subsidiary Corporation ("AMSC"), Constellation Communications, Inc. ("Constellation"), Loral/Qualcomm Partnership, L.P. ("LQP"), Motorola Satellite Communications, Inc. ("Motorola"), and the National Research Council's Committee on Radio Frequencies ("CORF") concerning petitions for reconsideration of the Commission's Report and Order in the above-captioned docket, 9 FCC Rcd 5936 (1994) ("R&O"). There are substantial areas of general agreement. For example, most parties agree that the Commission erred by permitting AMSC to submit a 1.6/2.4 GHz MSS system application. In addition, TRW believes that Constellation (see Constellation Opposition and Comments at 10) has articulated a view of the system amendment process with which all parties and the Commission can agree.

TRW also agrees with Constellation that the Commission should reaffirm its interim spectrum sharing plan.[1/] The Commission's interim plan is a well-reasoned and equitable way to apportion the burden that results from the fact that GLONASS receivers may require interference protection from 1.6/2.4 GHz MSS operations for a period of as-yet undetermined duration. Below, TRW addresses several other matters that require further comment.

I. The U.S. Spectrum Sharing Plan Must Be Extended Throughout North America To Ensure Adequate 1.6/2.4 GHz MSS Service To All Parts Of The United States.

TRW and Constellation agree that the Commission must commit to undertake coordination efforts to extend its 1.6/2.4 GHz spectrum sharing plan throughout North America to ensure that system operators can actually provide service to all parts of the United States.[2/] The arguments to the contrary made by LQP and Motorola distort the technical realities of 1.6/2.4 GHz MSS service and obscure the Commission's intent that service be made available at all locations within U.S. borders.

LQP claims that coordination of 1.6/2.4 GHz MSS systems in adjacent countries would not be difficult to achieve because coordination techniques, such as beam management, might "allow a CDMA system to operate co-frequency with a

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1/ See R&O, 9 FCC Rcd at 5956-59; Constellation Opposition and Comments at 15-18.

2/ See Constellation Opposition and Comments at 15; TRW Petition at 4-5.

TDMA system in an adjacent region."[3/] TRW, LQP and the other CDMA applicants in this proceeding spent many months in negotiations on this very point, and concluded that no available coordination methods -- beam management included -- would be sufficient to eliminate harmful interference to the primary uplink of CDMA systems from the secondary downlink of Motorola's TDMA system where these two types of systems operated on a full or partial co-frequency, co-coverage basis.[4/] The Commission should therefore reject LQP's current and unsubstantiated assertions.

LQP also urges the Commission not to extend its band sharing plan throughout North America because Resolution 46 (adopted at the 1992 World Administrative Radio Conference) "already sets forth a procedure for coordination of LEO MSS systems," and because the Commission has committed to work with the global community to promote MSS.[5/] International coordination concerns alone are the subject of Resolution 46; coordination between and among U.S. systems for U.S. service is at the root of TRW's proposal to extend the Commission's spectrum plan throughout North America. In this respect, if Mexico, for example, were to authorize Motorola's proposed FDMA/TDMA system to operate bi-directionally across the 1613.8-1626.5 MHz band, there can be no doubt that the interference to U.S. CDMA

3/ LQP Opposition and Comments at 4.

4/ See Final Report of the Majority of the Active Participants of Informal Working Group 1 to Above 1 GHz Negotiated Rulemaking Committee at §§ 4.1, 4.5-4.6 (April 6, 1993). Even if CDMA and TDMA systems do not operate on a co-frequency, co-coverage basis, asymmetrical operating authorizations in different regions could produce in-band interference events. Id. at § 4.5.1.

5/ LQP Opposition and Comments at 4.

systems would prevent such systems from providing adequate service to large portions of the United States. Therefore, the spectrum sharing plans that the United States' neighbors adopt will directly affect the viability of the Commission's U.S. 1.6/2.4 GHz MSS coverage requirements.

TRW expects the Commission and the rest of the United States Government to take every step within their collective power to protect the right of U.S. 1.6/2.4 GHz MSS system licensees to operate to the very limit of the bands which have been allocated domestically for their use.[6/] Moreover, even in international areas not affecting domestic service, TRW renews its unopposed call for the Commission to follow its own precedent[7/] by stating that it will consider an extension of the U.S. spectrum sharing plan if such an extension is the most appropriate response to coordination issues involving U.S. licensees that arise outside U.S. borders.[8/]

6/ LQP could not be more wrong in suggesting that, by seeking to safeguard its domestic spectrum plan, the Commission would "pose a serious threat to the leadership role of the United States in the international MSS community." LQP Opposition and Comments at 5. As LQP itself observes, the Commission has stated repeatedly that "all decisions relating to the implementation of 1.6/2.4 GHz mobile-satellite service within a country's territory will remain solely within that country's jurisdiction and control." Id. at 4-5. Any failure on the part of the United States to assert its sovereignty with respect to 1.6/2.4 GHz MSS within its own territory would demonstrate a lack of resolve that would quickly be exploited by nations hoping to compete with or limit the scope of U.S. 1.6/2.4 GHz MSS systems.

7/ See Orbital Communications Corp., FCC 94-268, slip op. at 7 (released October 27, 1994) (imposing this proviso on the grant of an NVNG MSS application); TRW Petition at 23 n.55.

8/ TRW urges the Commission to reject the new opposition of Motorola to an extension of the U.S. spectrum sharing plan throughout North America. Motorola offers

(continued...)

II. A Ban On Preferential Arrangements Between 1.6/2.4 GHz MSS Licensees And Foreign Entities Would Safeguard Competition, And Would Pose No Threat To Other Nations' Sovereignty.

Motorola, Constellation and TRW all agree that the Commission should prohibit agreements between 1.6/2.4 GHz MSS licensees or system operators and foreign entities that preclude entry into a foreign market by other 1.6/2.4 GHz MSS systems.[9/] Even LQP generally agrees that monopoly agreements between U.S. 1.6/2.4 GHz MSS systems and foreign countries are inappropriate.[10/]

LQP, however, distorts the arguments of both TRW and Motorola when it asserts that the non-exclusivity condition each separately proposed would constitute "a de facto global band segmentation requirement."[11/] The condition TRW proposed was very specific; TRW urged the Commission "to prohibit its 1.6/2.4 GHz MSS licensees from *entering into any arrangement* with any foreign entity or

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[8/](...continued)
nothing more than the contrived and false assertion that the TRW proposal offends the sovereignty of other nations, and the cryptic assertion that its spectrum requirements "will be different in other countries." Motorola Comments at 17.

[9/] Motorola Comments at 11-12; Constellation Opposition and Comments at 14; TRW Opposition and Comments at 16-17; TRW Petition at 21-23.

[10/] See LQP Opposition and Comments at 5-6. Only AMSC opposed the adoption of this safeguard to the viability of a truly global, competitive 1.6/2.4 GHz MSS. See AMSC Comments at 8. As support, AMSC cites the Commission's decision to grant AMSC a domestic monopoly in certain geostationary MSS bands (and thereby to exclude foreign systems). Id. Although this example is of questionable utility, given that the spectrum in which AMSC was given a domestic monopoly in 1988 remains unused by AMSC nearly seven years later, what TRW is seeking to avoid is exclusivity between a U.S. 1.6/2.4 GHz MSS system and a foreign administration that would lead to the exclusion of other U.S. systems. AMSC's citation to the Commission's grant of exclusivity to a U.S. system is therefore inapposite.

[11/] LQP Opposition and Comments at 5.

administration that would grant such licensees special concessions of any kind with respect to one another or that provide for exclusive market access."[12/] The condition that TRW seeks would not prevent a foreign government from adopting its own spectrum allocation plan.[13/]

III. The Commission Should Clarify The Rights Of 1.6/2.4 GHz MSS Licensees With Respect To The ESMU And The Use Of Beacon Systems.

The National Academy of Sciences, through CORF, opposes the requests of TRW and Constellation for clarification that the Commission will resolve disputes between 1.6/2.4 GHz MSS licensees and the National Science Foundation's Electromagnetic Spectrum Management Unit ("ESMU") over the use of beacon-actuated protection zones around RAS sites.[14/] It is not clear, without more, that

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12/ TRW Petition at 21-22.

13/ LQP's fails to distinguish the cases that TRW cites. See LQP Opposition and Comments at 7 & nn.3,4. TRW rejects LQP's claim that the mere fact that some of the licensing conditions imposed by the Commission involved authorizations for service between the United States and a foreign country renders the underlying decisions (see TRW Petition at 22 & n.51) inapplicable to the 1.6/2.4 GHz MSS. See LQP Opposition and Comments at 8. Rather, those cases demonstrate that, at a minimum, U.S. 1.6/2.4 GHz MSS system licensees can and should be prohibited from seeking or obtaining exclusive or preferential agreements from foreign entities affecting service to or from the United States. Moreover, in Orion, one of the cases TRW cited, the Commission imposed such a condition on an authorization for a international separate satellite system capable of providing service to, from and also entirely beyond U.S. borders. See Orion Satellite Corporation, 5 FCC Rcd 4937, 4940, 4942 (1990).

14/ See CORF Opposition at 11-12. CORF calls such a clarification unnecessary, but fails to acknowledge TRW's related request that the Commission consider requests or petitions for declaratory ruling by which 1.6/2.4 GHz MSS licensees may seek authority to employ beacon systems if they cannot reach agreements with the ESMU. Id. at 12.

the Commission will act to resolve potential disputes between 1.6/2.4 GHz MSS licensees and the RAS regarding the use of beacon systems. Unless the Commission states that it is willing to be the final arbiter of these disputes, the ESMU will hold an improper veto power over the licensees' use of beacon systems.[15/]

TRW also takes issue with CORF's response to TRW's request for clarification that a 1.6/2.4 GHz MSS operator who employs a beacon system under an agreement with the ESMU or under a grant of FCC authority need not offer position determination capability.[16/] If MSS licensees can demonstrate objectively that beacon systems will protect the RAS against harmful interference during periods of actual observation, they should be authorized to use them.[17/]

IV. All Qualified 1.6/2.4 GHz Conditional Licensees Are Entitled To Seek Feeder Link Allotments Wherever Sufficient Spectrum Is Allocated For This Purpose.

Constellation and LQP incorrectly suggest that 1.6/2.4 GHz MSS applicants should have priority to potential feeder link bands that they have specified in their applications.[18/] LQP specifically attacks "TRW's proposal to modify its

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15/ The MSS and RAS have co-primary status in the 1.6 GHz band segment.

16/ See CORF Opposition at 12.

17/ TRW rejects CORF's apparent attempt to interpose new conditions for interference protection at this late date. See id. (citing ITU-R R[A]. 769). CORF participated in the Negotiated Rulemaking in this docket, and should be held to its agreements there.

18/ See Constellation Opposition and Comments at 13-14; LQP Opposition and Comments at 14-17.

feederlink requests . . . to obtain C-band assignments, if such spectrum becomes available for MSS feeder links."[19/]

Constellation and LQP misunderstand both TRW's "proposal" and the posture of this proceeding. Having allocated spectrum in the 1.6/2.4 GHz bands for MSS, the Commission must now find sufficient spectrum to allocate for feeder links. Each applicant has expressed its desire to operate in particular bands, but these proposals do not vest an applicant with any preference or entitlement.[20/]

When the Commission determines which bands will be available for feeder links, each applicant/conditional licensee that is then qualified will be entitled to use a portion of this spectrum, and to amend its application accordingly. It is for this reason that the Commission made clear that it would not authorize any feeder link frequencies until the requirements of all qualified applicants could be met (R&O, 9 FCC Rcd at 5998),[21/] and further, that it would "allow licensees to modify their licenses to request operational authority in any new bands if, and when, they become

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19/ LQP Opposition and Comments at 14.

20/ Apparently, however, LQP would go a step further, allowing Ka-band frequencies to be "available as a fallback" for applicants requesting C-band links, but prohibiting other applicants from obtaining C-band assignments if they are available. See LQP Opposition and Comments at 14.

21/ For this same reason, LQP was part of the 28 GHz Band Negotiated Rule Making, which, among other tasks, addressed the prospects for Ka-band sharing among fixed satellites, the proposed Local Multipoint Distribution Service, and MSS feeder links.

available." Id. at 5999.[22/] TRW merely emphasized its concurrence with the Commission's position in its Petition for Reconsideration.

V. Motorola Mischaracterizes TRW's Reasonable Request For Milestone Flexibility.

In its Petition, TRW requested that the Commission announce that it would permit some flexibility in system milestones in order to accommodate incremental increases in system capacity.[23/] While Motorola "strongly opposes" this request as overly "flexible" and "excessively vague," it does not offer any cogent critique of the proposal.[24/]

TRW emphasized in its Petition that applicants for extensions would be required to show that their systems were in substantial compliance with the Commission's technical requirements with satellites already in operation and certify that they would complete the system initially authorized.[25/] This approach is hardly either vague or unduly flexible -- it is explicitly conditioned.

Most significantly, TRW's proposal ensures that service consistent with FCC regulations is already being offered before an extension is permitted. For this

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22/ LQP thus lacks credibility in asserting that changes in feeder link requests, made to comport with the spectrum that is ultimately made available, ought to be treated as "major amendments." This proposal is inherently inconsistent with the Commission's normal course to permit applicants to amend their plans to comply with rules and spectrum allocation schemes ultimately adopted -- a course that has been explicitly followed in this proceeding. See R&O, 9 FCC Rcd at 5961.

23/ See TRW Petition at 19-21.

24/ Motorola Comments at 18.

25/ See TRW Petition at 20.

reason, Motorola's suggestion that TRW's proposal promotes "service delay" is wholly incorrect. See Motorola Petition at 18. TRW's approach would permit only delays in capacity expansion consistent with sound business practices. In the event that service demand develops more slowly than anticipated, no purpose would be served by arbitrarily requiring a system to increase capacity and satellite redundancy to meet non-existent demand if it can already meet the Commission's technical service standards with its existing constellation.

CONCLUSION

For all of the reasons stated above and in its Petition, TRW's Petition should be granted.

Respectfully submitted,

TRW Inc.

By: _____

Norman P. Leventhal
Raul R. Rodriguez
Stephen D. Baruch
David S. Keir
Walter P. Jacob

Leventhal, Senter & Lerman
2000 K Street, N.W.
Suite 600
Washington, D.C. 20006
(202) 429-8970

January 5, 1995

Its Attorneys

CERTIFICATE OF SERVICE

I, Kaigh K. Johnson, hereby certify that a true and correct copy of the foregoing "Consolidated Reply Concerning Petitions For Reconsideration" was mailed, first-class postage prepaid, this 5th day of January, 1995 to the following:

*William E. Kennard, Esq.
General Counsel
Federal Communications Commission
1919 M Street, N.W.
Room 614
Washington, D.C. 20554

*Scott B. Harris, Esq.
Chief, International Bureau
Federal Communications Commission
1919 M Street, N.W.
Room 658
Washington, D.C. 20554

*James L. Ball
Associate Bureau Chief for Policy
International Bureau
Federal Communications Commission
1919 M Street, N.W., Room 658
Washington, D.C. 20554

*Thomas S. Tycz
Chief, Satellite & Radiocommunication Division
International Bureau
Federal Communications Commission
2025 M Street, N.W., Room 6010
Washington, D.C. 20554

*By Hand Delivery

*Cecily C. Holiday, Esq.
Deputy Chief, Satellite & Radiocommunication Division
International Bureau
Federal Communications Commission
2025 M Street, N.W.
Room 6324
Washington, D.C. 20554

*Fern J. Jarmulnek, Esq.
Chief, Satellite Policy Branch
International Bureau
Federal Communications Commission
2025 M Street, N.W.
Room 6324
Washington, D.C. 20554

Philip L. Malet, Esq.
Alfred M. Mamlet, Esq.
Pantelis Michalopoulos, Esq.
Steptoe & Johnson
1330 Connecticut Avenue, N.W.
Washington, D.C. 20036-1795
Counsel for Motorola Satellite Communications, Inc.

Michael D. Kennedy
Barry Lambergman, Esq.
Motorola, Inc.
Suite 400
1350 I Street, N.W.
Washington, D.C. 20005

Robert A. Mazer, Esq.
Rosenman & Colin
1300 - 19th Street, NW
Suite 200
Washington, DC 20036
Counsel for Constellation Communications

*By Hand Delivery

Jill Abeshouse Stern, Esq.
Norman J. Fry, Esq.
Shaw, Pittman, Potts & Trowbridge
2300 N Street, N.W.
Washington, D.C. 20037
Counsel for Mobile Communications Holdings, Inc.

John T. Scott III, Esq.
William Wallace, Esq.
Stephen M. Byers. Esq.
Crowell & Moring
1001 Pennsylvania Ave., N.W.
Washington, D.C. 20004-2505
Counsel for Loral Qualcomm Satellite Services, Inc.

Leslie Taylor, Esq.
Leslie Taylor Associates
6800 Carlynn Court
Bethesda, MD 20817-4302

Bruce D. Jacobs, Esq.
Glenn S. Richards, Esq.
Fisher, Wayland, Cooper, Leader & Zaragoza
2001 Pennsylvania Avenue, N.W.
Suite 400
Washington, D.C. 20006-1851
Counsel for AMSC

Lon C. Levin, Esq.
Vice President and Regulatory Counsel
AMSC Subsidiary Corporation
10802 Parkridge Boulevard
Reston, VA 22091

Dale Gallimore, Esq.
Counsel
Loral Qualcomm
7375 Executive Place, Suite 101
Seabrook, MD 20706

Gerald Hellman
Vice President
Policy and International Programs
Mobile Communications Holdings, Inc.
1120 - 19th Street, N.W.
Washington, D.C. 20036

Kaigh K. Johnson